

V. The following matrix represents the appliances sold at an appliance store during the first quarter of 2001.

	Jan.	Feb.	Mar.
Refrigerator	13	11	15
Stoves	14	8	10
TVs	10	2	5

11. What are the dimensions of the matrix? 3x3

12. Find the number of all appliances sold during February. 11+8+2 = 21 appliances

13. What does the number in location m_{32} represent? 2 - TVs sold in February
↑↑
row column

14. In April of 2001, 2 refrigerators, 6 stoves and 9 TVs were sold. Write a new matrix that represents all 4 months.

	J	F	M	A
R	13	11	15	2
S	14	8	10	6
T	10	2	5	9

15. What are the dimensions of the new matrix? 3x4

VI. Find the following given: use a calculator!

$$A = \begin{bmatrix} 3 & -4 \\ 2 & -3 \end{bmatrix} \quad 2 \times 2$$

$$B = \begin{bmatrix} 3 & 1 & 0 \\ -2 & 4 & 1 \end{bmatrix} \quad 2 \times 3$$

$$C = \begin{bmatrix} 4 & 3 & -1 \\ -2 & 1 & 0 \\ 5 & 6 & -3 \end{bmatrix} \quad 3 \times 3$$

$$D = \begin{bmatrix} 7 & -2 \\ 5 & 3 \end{bmatrix} \quad 2 \times 2$$

16. $AB = \begin{bmatrix} 17 & -13 & -4 \\ 12 & -10 & -3 \end{bmatrix}$

17. Inverse of A
 $\frac{1}{-1} \begin{bmatrix} -3 & 4 \\ -2 & 3 \end{bmatrix} = \begin{bmatrix} 3 & -4 \\ 2 & -3 \end{bmatrix}$

19. $BA =$
 not possible

20. $A+C$
 $\begin{bmatrix} 3 & -4 \\ 2 & -3 \end{bmatrix}$

not possible

18. Det C
 $\begin{vmatrix} 4 & 3 & -1 \\ -2 & 1 & 0 \\ 5 & 6 & -3 \end{vmatrix} = (-12 + 0 + 24) - (-5 + 0 + 18) = 12 - 13 = -1$

21. $3A - D = \begin{bmatrix} 9 & -12 \\ 6 & -9 \end{bmatrix} - \begin{bmatrix} 7 & -2 \\ 5 & 3 \end{bmatrix} = \begin{bmatrix} 2 & -10 \\ 1 & -12 \end{bmatrix}$

22. $\det B$
 not possible

23. $D - A = \begin{bmatrix} 4 & 2 \\ 3 & 6 \end{bmatrix}$

24. $BC = \begin{bmatrix} 10 & 10 & -3 \\ -11 & 4 & -1 \end{bmatrix}$